IN THE CLAIMS:

Please add new claims 51-60 as follows:

--51. An optical information recording apparatus for recording information in an optical information recording medium having an information recording layer in which information is recorded utilizing holography, the apparatus comprising:

an information light generator that generates information light by first modulating a first light based on first information;

recording reference light generator that modulates a second light to generate a reference light based on second information; and

a recording optical system for illuminating the information recording layer with the information light and the reference light, the information light and the reference light illuminating the information recording layer on a same side such that the first and second information is recorded in the information recording layer as an interference pattern between the information light and the reference light.--

--52. An optical information recording apparatus according to claim 51, further comprising:

a position controller that positions the information light and the reference light on the optical information recording medium based on positioning information in the optical information recording medium.--

--53. An optical information recording apparatus according to claim 51, wherein the recording reference light generator one or more of spatially modulating the second light and phase modulating the second light to generate the reference light.--

--54. An optical information recording method for recording information in an optical information recording medium having an information recording layer in which information is recorded utilizing holography, the method comprising:

generating information light carrying information;

generating reference light;

modulating the reference light; and

illuminating the information recording layer with the information light and modulated reference light on a same side of the optical information recording medium; and

recording the information in the information recording layer as an interference pattern between the information light and the modulated reference light.--

--55. An optical information recording method according to claim 54, wherein the modulating is one or more of spatially modulating and phase modulating.--

--56. An optical information reproducing apparatus for reproducing information utilizing holography from an optical information recording medium having an information recording layer in which the information is recorded in the form of an interference pattern between information light carrying the information and reference light, the apparatus comprising:

a reference light generator that modulates light to generate reference light; and

a reproducing optical system that illuminates the information recording layer with the reference light and collects, from a same side of the information recording layer that is illuminated, reproduction light emanating from the information recording layer.--

--57. An optical information reproducing apparatus according to claim 56, wherein the reference light generator modulates the light in substantially a same way that a recording reference light was modulated when the information was recorded.--

--58. An optical information reproducing apparatus according to claim 56, further comprising a position controller that positions the reference light on the optical information recording medium based on position information in the optical information recording medium.--

--59. An optical information recording/reproducing apparatus for recording information in an optical information recording medium having an information recording layer in which information is recorded utilizing holography and for reproducing the information from the optical information recording medium, the apparatus comprising a pick-up device disposed on a side of the optical information recording medium, the pick-up device having:

a light source for emitting light;

an information light generator that spatially modulates a first portion of the light based on the information;

a reference light generator that generates a first reference light for recording and a second reference light for reproduction from a second portion of the light; and

an optical system that illuminates the side of the information recording layer with the information light and the first reference light to record the information in the information recording layer as an interference pattern between the information light and the first reference light, and that illuminates the information recording layer with the second reference light and collects reproduction light emanating from the side of the information recording layer when illuminated with the second reference light.--

--60. An optical information recording/reproducing apparatus according to claim 59, wherein the first reference light is one or more of spatially modulated and phase modulated to record the information and the second reference light is modulated in substantially a same way as a reference light used to record the information that is to be reproduced.--

REMARKS

Claims 1, 2, 6-8, 11, 44 and 51-60 are pending in the application. By this Amendment, the Abstract is replaced, the specification is amended, and new claims 51-60 are added. The specification is amended on page 6, lines 21-22 to correct a mistranslation of the priority PCT